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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,460	03/28/2000	Joseph Hayden	SGT-34-P1	5114

23599 7590 02/27/2003

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EXAMINER

SANGHAVI, HEMANG

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

09/536,640

Applicant(s)

TEZUKA ET AL. 

Examiner

Hemang Sanghavi

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 6-14 and 19-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 15-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.                      6) ☐ Other:

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of Group I invention (Claims 1-5 and 15-18) in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 2 of claim 15, the term "the total optical pathlength, nL" lacks antecedent basis. Also the claims fail to specify what does "n" or "L" refers to.

Claims 16-18 are necessarily rejected since these claims directly or indirectly depend upon the rejected base claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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Claims 15-17 are rejected under 35 U.S.C. 102(a) as being anticipated by Shirasaki (IEEE Photonics Technology Letters, 11/1999).

Shirasaki discloses a temperature insensitive design of Fabry-Perot Etalon comprising two layers of different compositions wherein the total optical pathlength  $nl$ , across the layer is essentially independent of temperature.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Durand et al (US 4,929,063).

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Durand et al discloses an optical element (a bandpass filter) comprising a silver chloride or cesium bromide. See lines 31-52 of column 2 and lines 50-64 of column 4.

Durand et al fails to disclose a surface figure of less than 200 nm for the silver chloride or cesium bromide.

However, as well known in the art that actual threshold and long lifetime of crystalline structure such as silver chloride or cesium bromide can greatly depend on the surface preparation. Surface figure is a measurement of the deviation from an ideal surface in terms of waves, peak to valley. The materials disclosed in Durand et al are usually polished and provided with desired thickness to perform filter application.

From collective well known techniques, the ordinary artisan would have found it desired to provide optimum surface figure, i.e. less than 200 nm in the Durand et al reference for the purpose of advantageously providing an efficient long life filter.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brownrigg et al (US 5,018,827).

Brownrigg et al discloses an optical fiber including a core and a cladding surrounding the core. The core is made from a material having an index of refraction,  $n$ , and a coefficient of expansion,  $\alpha$ , such that:

$$Dn/dT = -n \alpha.$$

Brownrigg et al fails to disclose surface figure of less than 200 nm for the core material.

However, as well known in the art that actual threshold and long lifetime of crystalline structure can greatly depend on the surface preparation. Surface figure is a

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measurement of the deviation from an ideal surface in terms of waves, peak to valley.

The material of the core in Brownrigg et al must be carefully chosen to provide a negative temperature coefficient and carefully drawn to obtain the optical fiber.

From collective well known techniques, the ordinary artisan would have found it desired to provide optimum surface figure, i.e. less than 200 nm in the Brownrigg et al reference for the purpose of advantageously providing an efficient and insensitive to temperature optical fiber.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shirasaki, as applied to claim 15-17 above.

Shirasaki, as discussed above, fails to disclose a surface figure of less than 200 nm for the etalon plate.

However, as well known in the art that actual threshold and long lifetime of the crystalline structure can greatly depend on the surface preparation. Surface figure is a measurement of the deviation from an ideal surface in terms of waves, peak to valley. The materials disclosed in Shirasaki are usually polished and provided with desired thickness to perform filter application.

From collective well known techniques, the ordinary artisan would have found it desired to provide optimum surface figure, i.e. less than 200 nm in the Shirasaki reference for the purpose of advantageously providing an efficient long life filter.

### ***Conclusion***

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Downing discloses an optical display material including Silver Chloride. Zapata discloses a solid-state laser with a silver chloride material. Chen et al discloses a temperature stable etalon filter.

Ackerman et al discloses a crystalline material including silver chloride to control the thermo-optic behavior of an optical path. However, this reference is not available as prior art due to its publication date.

The prior art submitted by applicant has been considered. See attached copy of form PTO-1449.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hemang Sanghavi whose telephone number is 703-305-3484. The examiner can normally be reached on Monday-Thursday (8:30 AM-6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 703-308-4819. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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Hemang Sanghavi  
Primary Examiner  
Art Unit 2874

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February 23, 2003